IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TELCORDIA TECHNOLOGIES, INC., Plaintiff, v. LUCENT TECHNOLOGIES, INC. Defendant.	)	Civil Action No. 04-875 GMS
TELCORDIA TECHNOLOGIES, INC., Plaintiff, v. CISCO SYSTEMS, INC. Defendant.	)	Civil Action No. 04-876 GMS

TELCORDIA'S OPENING CLAIM CONSTRUCTION BRIEF

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I. The Nature and Stage of the Proceeding

This brief deals with the claim construction issues in the infringement actions brought by Telcordia Technologies, Inc. ("Telcordia"), formerly Bell Communications Research, Inc. ("Bellcore"),[1] against Lucent Technologies, Inc. ("Lucent") and Cisco Systems, Inc. ("Cisco") for infringement of U.S. Patent Nos. 4,893,306 ("the '306 patent"), Re. 36,633 ("the '633 patent"), and 4,835,763 ("the '763 patent"). The patents are directed toward methods and apparatuses used in telecommunications and data communications networks. One of the three patents, the '306 patent, was already construed—both by Judge Farnan and by the Federal Circuit—in *Bell Communications Research, Inc. v. FORE Systems, Inc.*, (the *"FORE"* case).[2]

II. Summary of the Argument

A. Summary of Positions

Consistent with general claim construction principles, Telcordia's proposed constructions are grounded in and supported by the language of the claims themselves, the patents' specifications, and the prosecution histories. Moreover, for the '306 patent, Telcordia advances the same constructions that were previously applied by the Federal Circuit and by Judge Farnan in the *FORE* case. These constructions were already adjudicated, as a matter of law, after complete briefing and argument. Telcordia submits that this Court should give deference to the prior constructions rather than attempting to reinvent the wheel. *Mendenhall v. Cedarapids, Inc.*, 5 F.3d 1557, 1570 (Fed. Cir. 1993) ("[D]eference should be given by one court to prior decisions of other tribunals on the same legal issue.").

Defendants, on the other hand, propose to revisit the already-construed claims, advancing constructions that are at odds with both Judge Farnan's prior constructions and the Federal Circuit's. Also, defendants employ claim construction techniques that are unsound on their face. For instance,

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[1] Bellcore was formed in 1984 as part of the AT&T breakup to assist the newly created Regional Bell Operating Companies with technical support and research aimed at insuring the safety and integrity of the U.S. telecommunications network.

[2] Telcordia is not asserting the '763 patent in its action against Alcatel USA, Inc. ("Alcatel"), and Alcatel has asserted a counterclaim for infringement of its U.S. Patent No. 6,247,052 ("the '052 patent") in that case. Accordingly, Telcordia is filing a separate brief in the Alcatel case in which it relies on this brief's discussion of the '306 and '633 patents and directly addresses only Alcatel's '052 patent.

defendants propose four different and inconsistent constructions for the same claim term (the functional language of the "inserting means" of claim 4 of the '306 patent). Other times, defendants propose, without any justification, the same construction for different claim terms that use different language and appear in different grammatical structure. Even more unconventionally, defendants seek to change the words of the claims—by making plural terms singular—before applying their constructions, suggesting that the Court construe language that is not in the claims. Finally, using another improper technique, defendants seek to limit Telcordia's inventions to the preferred embodiments. In summary, defendants' claim construction techniques are unsound and invite error.

B. The Law of Claim Construction

"A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004). "Absent an express intent to impart a novel meaning, claim terms take on their ordinary meaning." *Elekta Instrument S.A. v. O.U.R. Scientific Int'l*, 214 F.3d 1302, 1307 (Fed. Cir. 2000). "In determining the meaning of disputed claim language, a court looks first to the intrinsic evidence of record, examining, in order, the claim language itself, the specification, and the prosecution history." *Alza Corp. v. Mylan Labs.*, 391 F.3d 1365, 1370 (Fed. Cir. 2004).

Several of the disputed claim terms in this case are in means-plus-function format under 35 U.S.C. § 112(6). Construction of means-plus-function limitations is a two-step process that requires identification of (1) "the function explicitly recited in the claim" and (2) "the corresponding structure set forth in the written description that performs the particular function set forth in the claim." *Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1369 (Fed. Cir. 2001) (citation omitted).

III. Argument

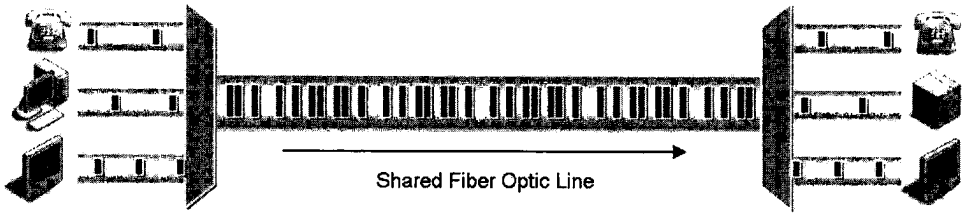
A. The '306 Patent

The '306 invention allows different data sources, even those providing data at different bit rates (for example, voice, video, and computer data), to share the same communication link using a technique the patent calls "Dynamic Time Division Multiplexing" (DTDM). In conventional "Time Division

Multiplexing" (TDM), signals from different sources are transmitted over the same link by transmitting signals from each of the sources only during a fixed time period (slot) and in a fixed rotation. In contrast, DTDM permits data from different sources to be transmitted during any available time period, i.e., the multiplexing of signals is flexible or "dynamic." Further, because DTDM does not require each source to wait before its data can be transmitted over the shared link (as can happen in TDM), each stream of source data can be transmitted at its own particular "bit rate."

DTDM takes advantage of "high bandwidth" communication links, i.e., transmission media that can transfer large volumes of data at a high rate. Before source data (in the form of a series of ones and zeroes, or "bits") is transmitted, the bits are first arranged in the form of "packets," which consist of discrete blocks of data, each having a "header" at the front indicating where the data is being sent. As soon as a packet from any source has been formed and is ready to be sent, that packet can be written into an even larger package of data, referred to as a "frame," for transmission over a communication link. The frames, which are continually being created, are divided into separate "overhead" and "payload" fields, which are arranged so that packets of source data can be placed in the payload fields.

A simplified illustration of the "dynamic" multiplexing of data from three different sources on the same communication link, as taught by the '306 patent, is set forth below.



The '306 patent's DTDM technique thus accommodates different sources of data, even ones that transmit data at different bit rates. This means that variable bit-rate sources (such as packet-generating computer devices that can transmit large but intermittent "bursts" of data) as well as constant bit-rate sources (such as traditional telephones that transmit a smaller but continuous volume of data) can transmit data over the same communication link. In this way, the '306 invention eliminates the need to construct separate telecommunications infrastructures to deal with different kinds of data sources.

1. "frame timing information" and "timing information"

'306 claim term	Telcordia's construction	Defendants' construction
frame timing information [claims 1, 3] timing information [claim 4]	frame alignment information comprised of more than one bit	frame alignment information

The parties' dispute over the construction of "frame timing information" and "timing information" is the exact dispute that was before Judge Farnan in the *FORE* case, namely, "whether 'frame timing information' must be more than one bit, as Bellcore contends, or may it be one or more bits, as FORE contends." *Bell Communications Research, Inc. v. FORE Sys., Inc.*, 113 F. Supp. 2d 635, 643-44 (D. Del. 2000). In a well-reasoned analysis of the specification, Judge Farnan determined that "'frame timing information' means frame alignment information comprised of more than one bit." *Id.* at 644. Telcordia thus advances the construction, the intrinsic support (Col.4:52-54; Col.6:61-64), and the reasoning that is already set forth in the *FORE* opinion. *Id.* at 643-44.

Defendants, on the other hand, propose that this Court truncate Judge Farnan's earlier construction, removing the phrase "comprised of more than one bit." The result of defendants' proposal, which has no basis in the intrinsic record, would be to inject a new ambiguity into an already established construction. This Court should adopt Judge Farnan's construction of "frame timing information." Further, the same construction should be adopted for "timing information" in claim 4 since claim 4 provides that "timing information" is contained in the transmission overhead field of each frame, thus making it clear that "timing information" is being used in claim 4 to mean the same thing as "frame timing information."

2. "empty payload field"

Again, Telcordia advances the construction of "empty payload field" that has already been established in the *FORE* case. *Bell Communications Research, Inc. v. FORE Sys., Inc.*, No. Civ. A. 98-586 JJF, 2003 WL 22295442, at *1 (D. Del. Oct. 3, 2003) (attached as Ex. A). Defendants also purport to advance that same construction, but would have this Court revise and narrow the earlier construction. As a practical matter, defendants are proposing an inconsistent construction of "empty payload field" by

essentially limiting the language to mean "empty of source data, but including only certain types of bit signals (e.g., garbage bits or background noise)."

The construction of "empty payload field" from the *FORE* case, "empty of source data, but including bit signals of some kind," is straightforward and requires no revision. *Id.* The construction means what it says, i.e., a payload field is "empty" when it is "empty of source data." This is exactly what Bellcore meant in the *FORE* case when it "ask[ed] the Court to clarify its construction so that it is understood that the 'empty payload field' contains data of some kind, but zero source data," and it is exactly what the Court meant when it determined that "[t]he Court will clarify its construction to reflect the Court's agreement with Bell's interpretation." *Id.* The Court rejected FORE's contention that an "empty payload field" had to be empty in the absolute sense.

There is no reason to redefine what is meant by "empty" in the context of a payload field. Moreover, there is no support in the prior or intrinsic record for defendants' position that "empty of source data" means not only "empty of source data" (as the prior construction holds), but also empty of specific types of other data as well (a concept absent from the prior construction). Telcordia thus incorporates the prior construction, the intrinsic support (Fig.12; Col.5:13-22; Col.7:27-35; Col.16:62-Col.17:2), the argument set forth in the prior record, and the reasoning in *FORE* in support of its position that "empty payload field" means "empty of source data, but including bit signals of some kind."

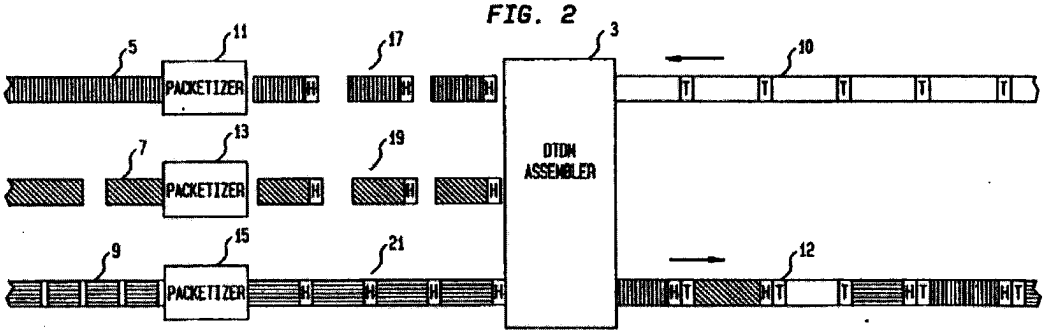
3. "filling" and "inserting"

'306 claim term	**Telcordia's construction**	**Defendants' construction**
filling the empty payload fields in said frames with data in packetized format from a plurality of sources which have access to the bit stream including circuit or packet sources [claim 1]	writing data in packetized format from sources into all available bit positions of payload fields that would otherwise be occupied by non-source bit signals	replacing the empty payload field with data from a single source
inserting said packets from said sources into the empty payload fields of said frames [claim 3]	writing packets from the sources into payload fields that would otherwise be occupied by non-source bit signals	replacing the empty payload field with data from a single source

inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field [claim 4]	writing packets from the sources into payload fields that would otherwise be occupied by non-source bit signals, where the packets are written on a first-come, first-served basis because no payload fields are pre-assigned for use by particular sources	replacing the empty payload field with data from a single source

Claim 1 requires the step of "filling" empty payload fields with data in packetized format, whereas claims 3 and 4 use variations of "inserting" packets into empty payload fields. The concept is quite simple—data is simply being moved from one place to another—and is illustrated most clearly in Fig. 2 of the '306 patent, which incidentally shows an example of data from three different sources "filling" some of the empty (white) payload fields (as would be required by claim 1).

FIG. 2



Claim 1 is a method claim that requires a "filling" step, claim 3 is a method claim that requires an "inserting" step, and claim 4 is a means-plus-function apparatus claim, where the "inserting" language defines the function of the "inserting means." The three claims are of different structure and scope, reflected by the fact that the ordinary meanings of "filling" ("[t]o put into (a container, for example) as much as can be held") and "inserting" ("[t]o put or set into, between, or among") are different. *American Heritage College Dictionary* 518, 717 (4th ed. 2002) (attached as Ex. B). Despite these differences in claim structure, language, and scope, defendants propose that the same construction, "replacing the empty payload field with data from a single source," must apply to three different phrases used in the claims. To further confuse matters, defendants offer four separate interpretations of the "inserting" language of claim 4 in the Final Joint Claim Chart (Lucent D.I. 93; Cisco D.I. 87). *See infra* pp. 13-16, 16, 17, and 20-21. Defendants initially suggest this phrase to mean, "replacing the empty payload field with data from a

single source," then to mean "packets are only put in frames which are empty," next to mean "an empty payload field that can be filled with a data packet from the source, among the plurality of sources, of the highest priority with a data packet ready to transmit," and finally to require structural limitations that are at odds with Judge Farnan's construction in the *FORE* case.

Defendants' set of constructions for the "inserting" and "filling" limitations cannot be correct, since defendants' proposed definitions of "inserting" are at odds with each other, and because offering identical definitions offered for "inserting" and "filling" ignores the rule that different words that have different meanings should generally be construed to mean different things. *Trintec Indus,. Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002) (holding that terms "creating" and "providing" had to be given different meanings where the specification treated the two terms differently).

Nothing in the claims, or the other intrinsic evidence, dictates that the "filling" or "inserting" steps entail "replacing" an empty payload field, as defendants contend.[3] The language of the claims simply does not state that an empty payload field must be "replaced." *Storage Tech. Corp. v. Cisco Sys., Inc.*, 329 F.3d 823, 830 (Fed. Cir. 2003) (The "analytical focus must begin with and remain centered on the language of the claims themselves."). Even claim 1, which requires that such a field be "filled," requires no more than the placement (writing) of data in all available positions, as opposed to calling for the additional limitation of "replacing" something else. Moreover, no variation of the word "replacing," or the concept of "replacing," is found anywhere in the specification or the prosecution history cited by defendants as support for their position.

Instead of "replacing," "writing" best describes how data is moved from a source into a payload field ("writing" applies regardless of whether the data is being "inserted" into an empty payload field or data is "filling" the entire empty payload field). Indeed, "writing" is consistently used in the claims, specification, and prosecution history to describe the movement of data into a payload field or frame (including the placement of data into payload fields as specifically set forth in the claim terms at issue):

[3] The term "replacing" suggests that an empty payload field must already exist before any source data can be inserted. Such an interpretation, however, is inconsistent with the Federal Circuit's holding that "the claims encompass the insertion of data into a frame's empty payload field while the frame is still being generated." *Bell Communications Research, Inc. v. FORE Sys., Inc.*, 62 Fed. Appx. 951, 956 (Fed. Cir. 2003) (non-precedential) (attached as Ex. C).

- "data in packetized format from any of said sources is *written* into any available empty payload field," Col.17:54-56 (emphasis added).
- "Data may be *written* into an empty DTDM frame as follows." Col.16:35-36 (emphasis added).
- "enabling the *writing* of data packets into specific DTDM frames," Col.16:14-15 (emphasis added).
- "The data to be *written* into the frame." Col.16:49 (emphasis added).
- "It is an important feature of the claimed invention that a data packet from any source can be *written* into any empty payload field of any available frame." August 21, 1989, Response to Office Action (attached as Ex. D) at 8 (emphasis added).

Defendants' construction is also wrong because, contrary to the express language of the claims, it creates a completely new limitation: all the data must come "from a single source." While the data in each individual packet is provided by a single source (as articulated in claim 4 and as illustrated, again, in Fig. 2), this merely indicates that data in a particular packet comes from a particular source. But nothing prevents multiple packets from different sources from being placed in the same frame.

Defendants' "single source" proposal ignores the fact that every noun in the claim terms at issue is plural (e.g., fields, packets, frames, sources). Additionally, the claims expressly state that data from a "plurality of sources" fills or is inserted into the empty payload fields of the frames. Nothing in this language limits the claims to one packet per payload field or one payload field per frame. Indeed, the prosecution history further refutes defendants' position, since applicants explained during prosecution that payload fields may contain multiple data packets, including data packets from multiple sources:

- In responding to Office Actions, the applicants twice explained that a payload field could contain more than one packet. February 17, 1989, Response to Office Action (attached as Ex. E) at 8 ("[I]t may be possible for a payload field of a frame to contain more than one packet."); August 21, 1989, Response to Office Action (Ex. D) at 7 ("[I]t may be possible for a payload field of a frame to have the capacity for more than one packet.").
- In distinguishing prior art, applicants stated that "[h]owever, in this embodiment only one transmission device or data source can transmit at a time using the transmission stream. (Column 5, lines 34-62). This is entirely contrary to the claimed invention which is directed to a transmission system which utilizes a particular bit stream to *simultaneously* transmit data from *a plurality of sources at bit rates desired by the sources*." August 21, 1989, Response to Office Action (Ex. D) at 13 (emphasis in original).

Defendants' construction of the claim in singular rather than plural syntax (i.e., employing "empty payload field" in the construction where the claims all state "empty payload fields," and employing "data from a single source" in the construction where the claims all state "plurality of sources") directly contradicts the language of the claims and should be rejected.

In summary, Telcordia's constructions for the "filling" and "inserting" steps are appropriate because they (1) account for the fact that "filling" and "inserting" are not the same, (2) employ the appropriate verb, "writing," (3) account for the plural syntax of the claim terms, (4) employ the established definition of "empty payload fields" (i.e., "fields that would otherwise be occupied by non-source bit signals"), and (5) are internally consistent with Telcordia's other proposed constructions and are also consistent with the language of the claims, the specification, and the prosecution history. (Figs.1,2,10; Col.6:66-68; Col.7:48-52; Col.9:22-33; Col.15:5-23.)

4. data in packetized format [claim 1], data packets [claim 3], data . . . into packet format [claim 4]

'306 claim term	Telcordia's construction	Defendants' construction
data in packetized format [claim 1]	data which is part of a discrete block of data having an address header at the front thereof	a discrete block of data having an address header at the front thereof
data packet[s] [claim 3]	discrete blocks of data, each having an address header at the front thereof	a discrete block of data having an address header at the front thereof
data . . . into packet format [claim 4]	processing data from a plurality of sources into a plurality of discrete blocks of data each having an address header at the front thereof	a discrete block of data having an address header at the front thereof

Here again defendants ignore the differences between the language used in claims 1, 3, and 4, and propose the same construction ("a discrete block of data having an address header at the front thereof") for the three different claim terms, each from a different claim, and each using different language in a different grammatical structure. Indeed, "data" is the noun in claims 1 and 4, while "packet" (or "packets") is the noun in claim 3.

Beginning with claim 1, the language of the claim element should be considered in the context of the claim: "filling the empty payload fields in said frames with *data in packetized format* from a plurality of sources" (emphasis added). Claim 1 expressly requires that it is data (not "packets") that fills the

payload fields, and not a single discrete block of data, as defendants propose. Of course, the data must be in a certain format. But a construction requiring that only one discrete block of data fill "payload fields in said frames" is inconsistent with the specification, which illustrates multiple blocks of data filling multiple fields. *See, e.g.,* Fig.2. Defendants' construction is also inconsistent with the prosecution history, which indicates that a payload field may "contain more than one packet" (i.e., more than one discrete block of data). February 17, 1989, Response to Office Action (Ex. E) at 8; August 21, 1989, Response to Office Action (Ex. D) at 7. Telcordia's construction captures the fact that the data is in "packetized format," as required by the claim, but does not impose a new limitation (found nowhere in the claim) that only one "discrete block of data" is used to fill only one payload field.

Moving to claim 3, here defendants' attempt to achieve the same incorrect result through a more transparent technique: asking the Court to first change the claim language before construing the claim term. Specifically, defendants propose a construction for "data packet" where the claim reads "data packets," plural. Defendants' repeated confusion over the syntax of the claim language (it is plural, not singular) and the syntax of the proposed constructions is not a trivial matter. All of defendants' constructions improperly manipulate the grammatical syntax of the claims in an effort to limit the invention to systems where only one "discrete block of data" is used to fill only one payload field. Telcordia submits that a plural claim term warrants a plural construction, and that it is incorrect to rewrite the claim term before construing it, or to offer a construction that is inconsistent with the syntax of the claim term, as defendants propose.

Finally, claim 4 contains the claim element "processing means for processing data from a plurality of sources into packet format." Col.18:27-28. The claim element, "data . . . into packet format," is actually part of the function of the "processing means" (which both parties agree is a means-plus-function claim). Again, defendants' construction of this term is in the wrong syntax. Moreover, defendants' construction ignores the context in which the disputed claim term appears (i.e., as the function of a means-plus-function claim element). *See Hockerson-Halberstadt, Inc. v. Converse, Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999) ("Proper claim construction, however, demands interpretation of the entire claim in context, not a single element in isolation."). Defendants' position that the disputed

element in claim 4 should be assigned the same construction as the disputed claim elements in claims 1 and 3 is particularly inappropriate in this instance, as the claim terms not only use different words, but also appear in vastly different contexts. Telcordia's proposed constructions not only incorporate the concept set forth in defendants' proposed construction (i.e., "a discrete block of data"), but they also apply the proper grammatical syntax, account for the differences between claims 1, 3, and 4, and recognize the context in which the claim elements appear.

5. plurality of sources which have access to the bit stream [claim 1] / plurality of sources having different bit rates and which have access to said bit stream [claim 3]

'306 claim term	Telcordia's construction	Defendants' construction
plurality of sources which have access to the bit stream [claim 1]	sources connected to a circuit path for supplying data to a framer generating a transmission bit stream	two or more sources that each insert data into the generated bit stream via its own tributary
plurality of sources having different bit rates and which have access to said bit stream [claim 3]	sources connected to a circuit path for supplying data to a framer generating a transmission bit stream	two or more sources that each insert data into the generated bit stream via its own tributary

The dispute between the parties on these claim terms centers on whether to accurately indicate how sources access the bit stream. Defendants incorrectly maintain that each source has its own exclusive path to the generated bit stream by requiring that access by each source must be "via its own tributary." Telcordia's construction is the only one that is consistent with the specification and drawings, since it provides that sources access the bit stream via a circuit path to a framer, which is the acknowledged source of the "generated bit stream" referred to in defendants' proposed construction. Nothing in the claim language, specification, or in Telcordia's proposal indicates that such a circuit path cannot be shared by multiple sources.

The language of the claims broadly states that sources "have access" to the bit stream, without any suggestion that "access" must be via an exclusive tributary. Defendants' insistence that each source have an exclusive tributary to the bit stream conflicts with the specification, and in fact would result in a construction of the claim that would exclude the preferred embodiment.

By considering Figs. 3, 7, and 10 together, it can be seen that the particular structure which enables packets from different sources 22 (Fig. 3) to access the DTDM bit streams formed by framers 92 (Fig. 7) and 160 (Fig. 10) is a circuit path including common connections 62 and 63. The top portion of Fig. 3 illustrates that different sources (voice, video, and data) are connected to and share a circuit path 62 before reaching the "single high bit rate bit stream at output 165." Col.15:27-28.[4]

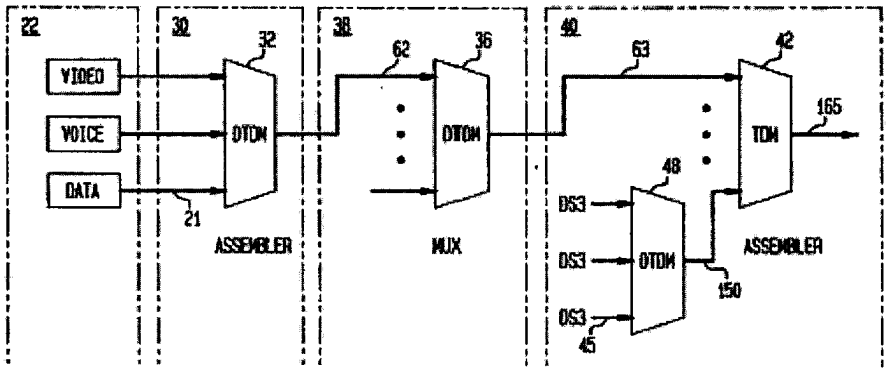


FIG. 3

Telcordia's construction also expressly and accurately notes that the precise manner in which sources "access" the bit stream is through a "framer" in which the claimed "bit stream comprising a sequence of frames" is necessarily generated. As is evident from this express claim language, the "bit stream" referred to in the claims is a stream in which the data has been arranged in frames. Consequently, Telcordia's proposed construction refers to a framer, which writes data from sources into frames in the bit stream. Col.16:35-48.

[4] Defendants' construction appears to limit the claims to the bit stream 62 formed by the framers 53 shown in Fig. 4 (which details the assembler 32 of Fig. 3). Such a construction is in direct conflict with the '306 invention, however, because it implies that packets from the sources have no access to the downstream framers 92 (Fig. 7) and 160 (Fig. 10). Without access to those bit streams, the sources have no way to send data through the network.

6. "such that" clauses [claims 1, 3] and "inserting" clause [claim 4]

'306 claim term	Telcordia's construction	Defendants' construction
such that data in packetized format from any of said sources is written into any available empty payload field of any of said frames [claim 1]	Data in packetized format from the sources can utilize the empty payload fields of the frames on a first-come, first-served basis because no payload fields are pre-assigned for use by particular sources.	packets are only put in frames which are empty
such that a packet from any of said sources is inserted into any available empty payload field of any of said frames [claim 3]	data packets from the sources can utilize the empty payload fields of the frames on a first-come, first-served basis because no payload fields are pre-assigned for use by particular sources	packets are only put in frames which are empty
inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field of any of said frames available to said inserting means [claim 4]	*See* Telcordia's construction for "inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field [claim 4]" (provided above).	packets are only put in frames which are empty

The "such that" clauses in claims 1 and 3 modify the "filling" and "inserting" clauses in those same claims, and provide definitional parameters for the claims. *See Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 858 (Fed. Cir. 1988).

At the outset, Telcordia notes that two phrases used in the "such that" clauses, (1) "data in packetized format" (or a "packet" in claim 3), and (2) "empty payload field," are both the subject of their own, separate claim construction disputes. *See supra* pp. 4-5, 9-10. Operating under the principle that the same words used in the same claim should carry the same meaning, the Court should expressly use the phrases "data in packetized format" and "empty payload field" in its construction of the "such that" clauses, in order to ensure that those phrases have one and only one meaning. Instead of using the already-construed phrases, defendants propose constructions that conflict with their own previously offered proposals for the same language, and therefore create new internal inconsistencies that would be embedded in the claims if the claim construction phase ended in their favor.

Rather than use the already-construed phrase, "empty payload field," in its construction, defendants' construction introduces a new and unnecessary concept--an "empty frame." Neither the phrase "empty frame," nor the concept of an empty frame (as opposed to an empty field within a larger

frame), is found anywhere in the claims. In the claims, "data in packetized format" or "packets" are "written" or "inserted" into "empty payload fields in [of] said frames," and not into empty frames. Indeed, the very claim elements that defendants are supposedly attempting to construe use "written" and "inserted" with the phrase "into any available empty payload field."

There is no reason for the Court to engage in the academic exercise of construing a phrase that is not in the claims, i.e., an "empty frame." Moreover, the logical disconnect in defendants' reasoning is apparent on its face. Nothing in the claims indicates that a frame consists of only a single payload field. Therefore, if a payload field is empty, that does not necessarily mean that the entire frame is "empty" (whatever that means). Indeed, in the embodiments shown in the specification, a frame is never completely "empty" in the literal sense, since a "frame" always has at least a "transmission overhead field" containing data. (Col.17:48-49; Col.18:5-6.)[5]

Telcordia's constructions avoid this problem by incorporating, rather than redefining, already-construed language, and focusing on what is meant by the language that has not yet been construed—writing data in packetized format *from any source into any available* empty payload field *of any of said frames*. This is an expansive phrase—it employs the word "any" three times—and it should not be misinterpreted by replacing an actual claim limitation, "field," with a different term, "frame," merely to narrow the claim to mean that "packets are only put into *frames* which are empty." Rather, consistent with the purpose of Telcordia's invention of *dynamic* TDM (or DTDM), this expansive language indicates that data in packetized format can be written into *any* empty payload fields because payload fields are not pre-assigned or dedicated to particular sources.

The DTDM concept is supported by the language of the specification ("allowing the voice and graphics tributaries 5, 7, to contend for empty frames on a first-come, first-served basis," Col.7:46-62), as

[5] In the *FORE* case, Judge Farnan construed the disputed term from claim 1 to mean "that packets are only put in frames which are empty, i.e. which have zero data in their payloads." 113 F. Supp. 2d at 646. To the extent that defendants rely upon Judge Farnan's earlier construction in support of their current position, Telcordia notes that the earlier construction was corrected on appeal and remand in two key respects. First, Judge Farnan's earlier constructions all presuppose that a complete frame is generated before data is written into the empty payload field. 113 F. Supp. 2d at 645. This construction was overturned by the Federal Circuit. 951 Fed. Appx. at 956 (Ex. C). Second, Judge Farnan's earlier construction indicates that empty frames have "zero data in their payloads." 113 F. Supp. 2d at 645. This construction was revised on remand. 2003 WL 22295442 at *1 (Ex. A).

well as circuit diagrams that illustrate, for example, a first-come, first-served arrangement. Figs.4,7,9,10,12. Specific payload fields are not "reserved" or "pre-assigned" to any specific source, as was the case in traditional prior art TDM systems. ("When TDM is used, each data stream comprises frames which are subdivided into slots. Corresponding slots in each frame are allocated to specific connections." Col.1:65-Col.2:3.) Indeed, in distinguishing traditional TDM systems during prosecution, applicants noted "[i]n contrast, in the claimed invention as set forth in independent claims 1, 3, 4 and 5 as amended, there is no advance reservation of particular frames or slots. Instead, each data source can insert a packet into any empty payload field of any available frame." August 21, 1989, Response to Office Action (Ex. D) at 12.

While Telcordia's proposed construction is consistent with the intrinsic record, defendants' construction is not. No limitation in the claim requires that "packets are only put in frames which are empty." Such a narrow construction is at odds with the expansive language of the claim: *any* of said sources . . . *any* available empty payload field . . . *any* of said frames. Moreover, defendants' construction directly conflicts with applicants' statement, made twice during prosecution, that a payload field could contain more than one packet. February 17, 1989, Response to Office Action (Ex. E) at 8 ("[I]t may be possible for a payload field of a frame to contain more than one packet."); August 21, 1989, Response to Office Action (Ex. D) at 7 ("[I]t may be possible for a payload field of a frame to have the capacity for more than one packet."). If, as defendants suggest, "packets are only put in frames which are empty," applicants' statements would make no sense, since once the first packet is put into a frame, it would no longer be an "empty frame" and a second packet could not be put into it.

Finally, defendants are again seeking to construe the function of the "inserting means" of claim 4 for a second time, this time proposing that the term means the same thing as the "such that" clauses of claims 1 and 3 (i.e., that "packets are only put in frames which are empty"). This time defendants expand their construction to include a new phrase that was not addressed above, "of any of said frames available to said inserting means." But this new phrase is not a differentiating factor that would justify construing the claim phrase as a whole to have two different meanings. To confuse matters further, defendants go on (*see infra* pp. 16-17) to isolate this same new phrase and give it a second (different and inconsistent)

construction. This incoherent analysis leaves the Court with a web of overlapping and inconsistent proposed constructions for the function of the "inserting means" of claim 4. Telcordia submits that the function of the "inserting means" of claim 4 has only one meaning, and, for all of the reasons already noted, Telcordia proposes the "writing" definition (supported by Figs.2,10; Col.7:48-52; Col.15:5-23) set forth above. *See supra* pp. 7-8.

7. available empty payload field [claims 1, 3] / empty payload field of any of said frames available to said inserting means [claim 4]

'306 claim term	Telcordia's construction	Defendants' construction
available empty payload field [claims 1, 3]	a payload field that is available to receive packet data from a source	an empty payload field that can be filled with a data packet from the source, among the plurality of sources, of the highest priority with a data packet ready to transmit
empty payload field of any of said frames available to said inserting means [claim 4]	a payload field that is available to receive packet data from a source	an empty payload field that can be filled with a data packet from the source, among the plurality of sources, of the highest priority with a data packet ready to transmit

The phrase "available empty payload field" is found in the "such that" clauses of claims 1 and 3, and a variation of this phrase is found in the function of the "inserting means" of claim 4 (now the third time that the function of the "inserting means" of claim 4 is addressed). Beginning with the language of the claims, it is clear that the empty payload field is available to receive packet data from a source. The proposals from Telcordia and defendants both recognize that concept. Defendants' proposal, however, inexplicably goes on to restrict the types of sources and the different priorities of those sources: "from the source, among the plurality of sources, of the highest priority with a data packet ready to transmit."

The claims, however, do not mention the concept of "priority" and are not so limited. To the contrary, the claims are expansive and state that data "from *any* of said sources is written into any available empty payload field." Col.17:56-57; Col.18:15-16 (emphasis added). Defendants' restrictive language is, therefore, directly inconsistent with the language of the claims. And while the specification does disclose an embodiment in which certain sources are given a higher priority than others, *see, e.g.*, Fig. 4, this feature, found only in one of the described embodiments, cannot be read into claims that use expansive language to cover other embodiments as well.

In the *FORE* case, Judge Farnan clearly recognized this point: "the Court acknowledges that the specification indicates that the 'framer units *may* be connected in a daisy chain fashion.' ('306 Patent, Col.16:32-33 (emphasis added)). However, a daisy chain configuration is not a mandatory requirement." 113 F. Supp. 2d 635, 650. Rejecting Judge Farnan's determination, defendants now ask the Court to make this optional feature (aspects of which are expressly recited in claim 7) into a "mandatory requirement" in all claims. *S.R.I. Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1122 (Fed. Cir. 1985) (en banc) ("It is settled law that when a patent claim does not contain a certain limitation and another claim does, that limitation cannot be read into the former claim in determining either validity or infringement.") (citation omitted).

8. generating means [claim 4]

'306 claim term	Telcordia's construction	Defendants' construction
generating means [claim 4]	The function is "generating a train of frames wherein each frame includes a transmission overhead field containing timing information and an empty payload field." The structures corresponding to the "generating means" are control 210, tristate device 222, ROM 224 and timing generator 209.	The claimed function is "generating a train of frames wherein each frame includes a transmission overhead field containing timing information and an empty payload field." The corresponding structure is: a control 210 that generates a periodic signal, a tristate device 222 connected to the control 210 that receives the periodic signal, a timing generator 209, a ROM 224 connected to the tristate device 222 from which a frame alignment word is read when the tristate device 222 receives the periodic signal, a bus 219 connected to the ROM 224 that carries the frame alignment word to a parallel-to-serial converter 216, a serial output 206.

The parties agree that the "generating means" of claim 4 is written in means-plus-function format, and the parties agree that the recited function of the claim is "generating a train of frames wherein each frame includes a transmission overhead field containing timing information and an empty payload field." Col.18:24-26. The parties disagree as to what structure in the specification performs the recited function.

In the *FORE* case, Judge Farnan determined exactly what structure in the specification performs the function of the "generating means." 113 F. Supp. 2d at 649. Specifically, the Court found:

> Although the specification repeatedly explains that the framer unit generates trains of empty frames, the specification also expressly identifies those structures of the framer unit involved in the generating means as control 210, tristate device 222, ROM 224 and timing generator 209. ('306 Patent, col. 16, lines 27-31; col. 16, line 62–col. 17, line 7)

> .... Accordingly, the Court concludes that the structures corresponding to the "generating means" are control 210, tristate device 222, ROM 224 and timing generator 209.

Id.

Telcordia advances the construction adopted in *FORE*, while defendants propose to include additional structure (parts of the framer that are not involved in the claimed generating function), even though this contention was expressly rejected by Judge Farnan. Under § 112(6), it is improper to import "structural limitations from the specification that are unnecessary to perform the claimed function." *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001) (citation omitted). Judge Farnan already considered all of the specific structural elements that defendants seek to add, and determined that they are not necessary to perform the recited function. Telcordia agrees with his reasoning, and incorporates the reasoning and intrinsic evidence from the prior record in advancing the same claim construction in this case.

Not only do defendants seek to add unnecessary structure, in spite of the contrary decision in the *FORE* case, but defendants also seek to modify the stated function in this portion of the claim. Recognizing that the language defining the recited function cannot be narrowed in the manner proposed, defendants attempt to accomplish exactly the same result indirectly by inappropriately incorporating functional limitations into what is supposed to be an identification of corresponding "structures" (*e.g.*, "control 210 *that generates a periodic signal*," "tristate device 222 . . . *that receives a periodic signal*," "a ROM *from which a frame alignment word is read*," "a bus 219 . . . *that carries the frame alignment word*."). In a means-plus-function claim, the particular function that the corresponding structure must perform is the recited function in the claim, and additional functions cannot be incorporated merely because the "corresponding structure" also may perform other functions that are not functional limitations in the claim. The Federal Circuit has held that "[u]nder § 112, ¶ 6, a court may not import functional limitations that are not recited in the claim." *Wenger*, 239 F.3d at 1233 (explaining that the district court improperly restricted the structure corresponding to the claimed function by incorporating a function the *specification* described as being performed by a preferred embodiment).

9. processing means [claim 4]

'306 claim term	Telcordia's construction	Defendants' construction
processing means [claim 4]	The function is "processing data from a plurality of sources into packet format." Packetizers 55 are the structures which perform the function recited in this element.	The claimed function is "processing data from a plurality of sources into packet format." The corresponding structure is a plurality of packetizers 55 each of which adds a packet header to its own source data and communicates a packet ready pulse to its own framer when a complete packet is stored in its own FIFO.

The parties agree that the "processing means" of claim 4 is written in means-plus-function format, and the parties agree that the recited function of the claim is "processing data from a plurality of sources into packet format." Col.18:27-28. The parties also generally agree, consistent with the Court's finding in the *FORE* case, "that packetizers 55 are the structures which perform the function recited in this element." 113 F. Supp. 2d at 650.

Defendants, however, go beyond the construction determined in *FORE* and again seek to improperly import additional functional limitations into the claim. Specifically, defendants insist that the a packetizer 55 operates to "add[] a packet header of its own source data and communicate[] a packet ready pulse to its own framer when a complete packet is stored in its own FIFO." This new language, clearly functional, is not part of the recited function of the claim and may not be imported into the claim. *Wenger*, 239 F.3d at 1233.

10. inserting means [claim 4]

'306 claim term	Telcordia's construction	Defendants' construction
inserting means [claim 4]	The function is "receiving said train of frames and inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field of any of said frames available to said inserting means to form said bit stream so that data from each of said sources can be transmitted at its own desired bit rate via said bit stream and so that data from said plurality of sources can be transmitted simultaneously via said bit stream." The structures corresponding to the 'inserting means' are control 210, tristate device 218, tristate device 220, frame detect 214 and timing generator 209.	The claimed function is "receiving said train of frames and for inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field of any of said frames available to said inserting means to form said bit stream so that data from each of said sources can be transmitted at its own desired bit rate via said bit stream and so that data from said plurality of sources can be transmitted simultaneously via said bit stream." The corresponding structure is a plurality of framers 53, each of which includes: a control 210, a tristate device 218, a tristate device 220, a frame detect 214 and a timing generator 209.

The parties agree that the "inserting means" of claim 4 is written in means-plus-function format, and the parties agree that the function is recited in the claim (with, of course, the caveat that, as noted above defendants have already offered three dueling constructions of this functional language). The parties disagree as to the structure corresponding to the recited function.[6]

This claim term was construed in the *FORE* case, and Telcordia advances the same construction that Judge Farnan adopted: "[T]he Court concludes that the structures corresponding to the 'inserting means' are control 210, tristate device 218, tristate device 220, frame detect 214 and timing generator 209." 113 F. Supp. 2d at 650. Telcordia incorporates the reasoning and intrinsic evidence in the prior record to advance the same claim construction.

Defendants, on the other hand, advance the exact construction that Judge Farnan rejected. Specifically, defendants' construction would limit the claim to "a plurality of framers 53"—one embodiment of the invention disclosed only as the "daisy chain" configuration set forth in Fig. 4. In the *FORE* case, however, Judge Farnan rejected FORE's argument (based on Fig. 4) "that the inserting means is multiple framer units arranged in a daisy chain," holding that :

[6] On March 1, 2006, two days before opening *Markman* briefs were due and over two weeks after the parties filed Final Joint Claim Charts with the Court, defendants informed Telcordia by email that they had unilaterally changed their proposed construction of the "inserting means" claim term.

> With regard to FORE's position that the structural means is multiple framer units arranged in a daisy chain, the Court acknowledges that the specification indicates that the "framer units *may* be connected in a daisy chain fashion." ('306 Patent, col. 16, lines 32-33 (emphasis added)). However, a daisy chain configuration is not a mandatory requirement. Further, as indicated above, the specification precisely outlines those structures which are involved in the insertion means. Accordingly, the Court concludes that the structures corresponding to the "inserting means" are control 210, tristate device 218, tristate device 220, frame detect 214 and timing generator 209.

113 F. Supp. 2d at 650.

Judge Farnan's prior construction is amply supported by the specification. Specifically, Figs. 7, 9, and 10 disclose the "inserting means" using only one framer. Moreover, defendants' improper identification of unnecessary structure ("a plurality of framers 53") complicates and confuses the meaning of the claim. Overall, in fact, defendants' have construed the functional language of the "inserting means" in four different, entirely inconsistent manners. This final effort adds to the confusion in a manner that is directly inconsistent with the decisions in the *FORE* case. Under defendants' latest construction of the claim (even if it could be reconciled with defendants' myriad other constructions), the invention would be limited only to the embodiment disclosed in Fig. 4 (the only embodiment disclosing "framers 53"). While each of defendants' four constructions is incorrect, the internal inconsistencies between the four different constructions serve as further support for rejecting these constructions.

11. generating a bit stream [claims 1, 3]

Telcordia submits that the term "generating a bit stream" found in claims 1 and 3 encompasses the creation of either serial or parallel bit streams, consistent with Judge Farnan's holding in the *FORE* case. 113 F. Supp. 2d 635, 644 ("[T]he Court concludes that the phrase 'generating a bit stream' encompasses the creation of either serial or parallel bit streams."). In addition, as noted in *FORE*, the specification supports Telcordia's position. Fig.12; Col.16:63-Col.17:2. Defendants do not offer a counterproposal for this claim term.

B. The '633 Patent

The '633 invention ensures that the source and destination clocks used in transporting data over a packet network are synchronized, using a technique referred to in the industry as the Synchronous Residual Time Stamp ("SRTS") method of clock recovery. Without "clock recovery," small timing

differences caused by the packet transmission process will eventually result in a loss of information. This problem can be illustrated by imagining a telephone call as a series of telegrams provided to a messenger at a rate of one every five seconds. If the messenger delivers the telegrams at a slower rate than they were received, the telegrams will at some point overflow the "in basket," and the phone call will become unintelligible as telegrams get lost or jumbled.

One solution to this problem is for the messenger to apply a "time stamp" to each telegram as it is received, which would allow the messenger to deliver the telegrams at the same rate they were received. As explained above in connection with the '306 patent, source data can be transmitted on a communication link with the bits arranged in the form of packets and frames, which can be divided into separate fields. In such a network, time stamp information can be included in, for example, the "overhead" field of the packets or frames being transported.

Unfortunately, traditional clock recovery techniques using a "time stamp" required transport of a relatively large number of data bits, thus taking up "bandwidth" in the communication links (and "space" in the frames and packets) that could otherwise be used to transmit data, voice, or video information. Instead of relying on this traditional approach, the '633 patent discloses a technique that transports timing information on a network more efficiently, i.e., using less bandwidth and space. The invention discloses a "Residual" Time Stamp technique that significantly reduces the number of bits required to provide a time reference but still provides enough timing information to enable synchronization of the source and destination clocks. In a simplified analogy, instead of sending a message with a time stamp having information regarding the year, month, day, hour, minute, and second, the '633 invention provides a time stamp consisting only of the information regarding the second. Due to the inventors' ingenuity, however, this is still enough information to allow the clocks to be synchronized.

1. residual time stamp (RTS) [claims 1, 5, 11, 33]

'633 claim term	Telcordia's construction	Defendants' construction
residual time stamp (RTS) [claims 1, 5, 11, 33]	the value in a P-bit counter sampled at the end of each RTS period	a contiguous p-bit representation of the number of network clock cycles [claims 1, 5] a contiguous p-bit representation of the number of derived network clock cycles [claims 11, 33]

The term "residual time stamp," a novel term at the time of the invention, is consistently and expressly defined in the specification as the value (i.e., the number) in a P-bit counter sampled at the end of a certain time period (an RTS period). Initially, the Abstract states that "[a]t the end of every RTS period formed by N service clock cycles, the current count of the P-bit counter, defined as the RTS, is transmitted in the ATM adaptation layer." '633 Abstract. The Summary of the Invention explains that "[a]t the source node, a free-running P-bit counter counts clock cycles in a clock signal derived from the network clock. . . . At the end of each RTS period, the current count of the free-running P-bit counter is sampled. That sampled value is the RTS." Col.3:66-Col.4:8. A numerical example, given in the Detailed Description, explains that the "P-bit sample is the Residual-TS (RTS)." Col.6:20. Similarly, in explaining Figure 2, the specification states that "[a]t every T seconds (N source clock cycles) latch 15 samples the current count of counter 12, which is then the P-bit RTS to be transmitted." Col.6:46-49.

The definition for the term "residual time stamp (RTS)" used in the specification is clearly set out and used consistently. This definition controls. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc) ("[A] patentee is free to be his own lexicographer.").

Telcordia construes the RTS as the value in a counter at the end of a certain time period (an RTS period). This is correct, since the value of any count is meaningful only if it is associated with a particular time period, especially when the count is described as related to time. Moreover, Telcordia's construction is consistent with the language and context of the claims. For example, method claim 1 first uses the term as part of the transmitting step: "transmitting from the source node to the destination node an RTS at the end of each RTS period that is equal to the modulo 2_p count of network clock cycles at that time." Col.9:1-4. This is consistent with Telcordia's position that the RTS is a value (i.e., "equal to the modulo 2_p count") of a count that exists at the end of each RTS period.

In contrast, defendants' proposed construction is at odds with the express definition of "residual time stamp" provided by the specification, and is unsupported by any claim language. One RTS, by itself, does not represent the number of network clock cycles in the RTS interval. Col.8:28-35. In addition to being inaccurate, defendants' construction introduces the concept of a "*contiguous* p-bit representation" from thin air. Neither the word "contiguous" nor the concept is found in the specification. Indeed, rather than clarifying matters, defendants' construction injects new ambiguity, since no guidance is found for interpreting the newly added "contiguous" limitation in either the claim language, the specification, or the prosecution history.

2. counting the network clock cycles [claim 1] / counting network clock cycles [claim 5]

'633 claim term	Telcordia's construction	Defendants' construction
counting the network clock cycles [claim 1] / counting network clock cycles [claim 5]	counting modulo 2^P the cycles of the network clock within an RTS period	counting the actual number of cycles from the timing reference that synchronizes the source and destination nodes

Telcordia and defendants disagree as to exactly what is being counted during the counting step of method claim one (and as the function of the "counting means" in apparatus claim 5). Part of the dispute centers on the fact that the claim terms call for counting "network clock cycles," and the parties disagree on the constructions of both "network clock" and "network clock cycles" (these ancillary disputes are addressed below). But regardless of the Court's ruling on those ancillary disputes, the parties' respective constructions of "counting the network clock cycles" crystallize two disputes that are exclusive to this claim term.

First, Telcordia's proposed construction recognizes the very specific type of counting that is called for in the claim, whereas defendants' proposed construction does not. The claim terms state "counting the network clock cycles modulo 2^P." Col.8:62-63; Col.10:1-2. A modulo count involves counting in a very specific manner. A "modulo" count can be readily understood by considering how a 12-hour clock provides a "module 12" count of the hours in a day. Because the clock completes two cycles in a day, one has to know which cycle the clock is in to know the correct time (or the number of hours that have passed since the day began). The clock, on its face, is ambiguous.

The parties do not disagree, in their respective claim construction positions, on the meaning of "modulo," and the parties both recognize (as they must) that this term is found in the claims. But by contending that it is "the actual number of cycles" that are being counted, defendants vitiate the express limitations in the claims requiring a modulo count. Instead, defendants introduce a different type of count—the "actual number"—that directly conflicts with the claim language. Further, the specification supports Telcordia's construction, recognizing that the invention involves modulo counting instead of requiring a count that corresponds to whatever defendants mean by "the actual number of cycles":

- "The derived network clock, f_{nx}, drives a P-bit counter, which is continuously counting these derived network clock pulses, modulo 2^P." Col.6:38-40.
- "Since counter 36 is a modulo 2_P counter . . . ." Col.7:47.

Also, defendants' proposed construction once again injects ambiguity rather than clarifying matters, since defendants provide no guidance for interpreting the newly added "actual number" limitation.

Second, Telcordia's proposed construction recognizes, consistent with the purpose of the invention and the subsequent claim language, that what is being counted must correspond to a particular time period in order for the count itself to have any meaning. By failing to specify any time interval, defendants' construction of the "counting" limitation does not, in fact, define what is being counted. In other words, the counting must be a measure of the duration of some specific time period, namely, the RTS period. Of course, the counter itself is "continuously counting the[] derived network clock pulses, modulo 2^P" (Col.6:39-40), but the claims specifically indicate that the relevant time interval during which the counting occurs is "within an RTS period." Col.8:64,66-67; Col.10:3-4, 6.

The specification is consistent with Telcordia's construction here as well because it consistently notes that it is the modulo 2^P count *within an RTS period* that is important:

- "[W]hen sampled at the end of each RTS period, the increment in the count of the P-bit counter is a quantized version of the count (modulo 2^P) of pulses in the RTS interval as modified by any accumulated fractional counts from a previous interval." Col.4:9-17.
- "At the end of each RTS period, the current count of the free-running P-bit counter is sampled." Col.4:6-8.

In summary, Telcordia's proposed construction accurately reflects the modulo counting expressly called for in the claims and, consistently with the subsequent claim language and the very purpose of

counting, necessarily defines the time intervals over which the counting occurs. Defendants' proposed construction for "counting," on the other hand, conflicts with the claim language and fails to meaningfully define the term, both because it uses the ambiguous term "actual number" and also because it ignores any mention of the time period over which counting occurs.

3. network clock [claims 1, 5, 11, 33]

'633 claim term	Telcordia's construction	Defendants' construction
network clock [claims 1, 5, 11, 33]	the timing reference that synchronizes the SRTS function at the source and destination nodes	the timing reference that synchronizes the source and destination nodes

Telcordia and defendants agree that the ultimate goal of the '633 invention is to synchronize the source and destination clocks. The specification confirms that "[a]n object of the present invention is to achieve synchronous timing recovery," and the Abstract states that "[a] Residual Time Stamp (RTS) technique provides a method and apparatus for recovering the timing signal of a constant bit rate input service signal at the destination node of a synchronous ATM telecommunication network." Abstract; Col.3:35-36.

Telcordia's proposed construction defines "network clock" in the context of the '633 patent, i.e., as the timing reference that synchronizes the SRTS function at the source and destination nodes. The network clock can serve many other timing functions in a working network, but those functions are not discussed in the patent. Defendants' proposed construction expands the meaning of "network clock" beyond the context of the patent to the point where it encompasses *any* version of the network clock that may be used for *any* purpose. This transparent attempt to create a non-infringement position through claim construction should be rejected by the Court.

4. network clock cycles [claims 1, 5]

'633 claim term	Telcordia's construction	Defendants' construction
network clock cycles [claims 1, 5]	cycles of the network clock (see above)	the actual number of cycles from the network clock

The dispute between the parties regarding the term "network clock cycles" is the same dispute regarding the term "counting the network clock cycles," discussed above. Adopting defendants' construction for "network clock cycles" would create an irreconcilable conflict, however, because the

claim would require two different and inconsistent types of counting (counting an actual number while the claim expressly requires modulo counting). Consequently, Telcordia incorporates its arguments set forth above for the construction of "counting the network clock cycles." *See supra* pp. 24-26.

5. 2^P counts uniquely and unambiguously represent the range of possible network clock cycles within an RTS period [claims 1 and 5]

'633 claim term	Telcordia's construction	Defendants' construction
2^P counts uniquely and unambiguously represent the range of possible network clock cycles within an RTS period [claims 1 and 5]	P is chosen so that 2^P defines a range of counts that represents each possible RTS period end-point with a different modulo 2^P count (bit pattern).	This claim limitation is indefinite for failure to satisfy the requirements of 35 U.S.C. § 112(2).

For eight of the disputed claim terms before the Court in this *Markman* proceeding (five '633 terms and three '763 terms), defendants have refused to offer a counterproposal at all, and instead have unilaterally recast the Court's *Markman* proceeding as, in effect, a summary judgment proceeding on validity. Telcordia submits that this is both premature and improper. As the Court is aware, a patent is statutorily presumed valid and a finding of invalidity requires proof by clear and convincing evidence. *See Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003). For purposes of invalidity under 35 U.S.C. § 112(2), therefore, the evidence must establish (clear and convincingly) that a person skilled in the field would not "reasonably understand the claim when read in the context of the specification." *Marley Mouldings Ltd. v. Mikron Indus., Inc.*, 417 F.3d 1356, 1359 (Fed. Cir. 2005).

This *Markman* proceeding, which is occurring before any expert testimony has been proffered on the patents and the technologies at issue, is not the appropriate forum for considering whether clear and convincing evidence overrides the presumed validity of a patent under 35 U.S.C. § 112(2). Rather, as the Scheduling Order dictates, summary judgment proceedings occur, if at all, after August 11, 2006.[7]

Telcordia acknowledges that validity under 35 U.S.C. § 112(2) is determined as matter of law. But even so, determining whether claims are indefinite from the perspective of one skilled in the art is

[7] Telcordia should be able to fully explore, develop, and present the evidence in opposition to a summary judgment challenge under 35 U.S.C. § 112(2). In this case, such evidence might include (1) the fact that the patent is licensed to others in the industry, (2) actual reports and testimony from experts skilled in the art, and (3) the fact that the patent is part of a standardized technology widely understood and employed by the industry.

often an inquiry that involves consideration of some facts, and importantly, expert testimony. *See, e.g., Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999). Indeed, the Federal Circuit has determined that invalidity under 35 U.S.C. § 112(2) can go to a jury. *BJ Servs. Co. v. Halliburton Energy Servs., Inc.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003) ("[D]efiniteness . . . is amenable to resolution by the jury where the issues are factual in nature."). At this stage of the case, Telcordia has not been afforded the opportunity to explore any fact or expert discovery that might bear on the issue of indefiniteness under 35 U.S.C. § 112(2), and the issue is not properly before the Court.

In short, beyond the fact that Telcordia's construction is the only construction that has been offered, it is amply supported. *See* Final Joint Claim Chart (Lucent D.I. 93; Cisco D.I. 87). It should thus be adopted.

6. transmitting . . . an RTS [claims 1, 5, 11, 33]

'633 claim term	**Telcordia's construction**	**Defendants' construction**
transmitting . . . an RTS [claims 1, 5, 11, 33]	sending an RTS over the network	the RTS is transmitted in a portion of the overhead other than the convergence sublayer overhead

Defendants, once again, attempt to improperly add new limitations into the claim. Here, they contend that transmission of the RTS can only occur in particular portions of the packets and frames that are transported over the network. According to defendants, the term "transmitting" somehow implies that the information being transmitted, the RTS, cannot be contained within a part of the overhead field that is referred to as the "convergence sublayer." The claims contain no such limitation. For example, claim 1 states: "transmitting from the source node to the destination node an RTS" (Col.9:1-2), and claim 5 recites "transmitting means . . . for transmitting over the telecommunications network an RTS" (Col.10:7-10). No language limits where the RTS must be placed in the packets or frames during transmission.

Moreover, defendants' proposed construction is inconsistent with the specification. The preferred embodiment disclosed there indicates the RTS is transmitted in the ATM adaptation layer (AAL). Specifically, "[e]ach successive RTS is incorporated within the ATM adaptation layer overhead by AAL processor 16." Col.6:52-53. The convergence sublayer that defendants seek to exclude is part of this very ATM adaptation layer. *See Newton's Telecom Dictionary* 22 (15th ed. 1999) (attached as Ex. F)

("AAL ATM Adaptation Layer of the ATM Protocol Reference Model, which is divided into the Convergence Sublayer (CS) and the Segmentation and Reassembly (SAR) sublayer.").

The only mention of a convergence sublayer in the patent is found in the Background of the Invention section. This section comments that the transmission of a traditional 16-bit time stamp (TS) in the convergence sublayer is disadvantageous and inefficient because of the relatively large size of the time stamp. Col.3:32-34. The Synchronous Residual Time Stamp (SRTS) method of clock recovery, however, avoids this problem associated with the traditional TS by reducing the number of bits needed to provide a time representation. *See, e.g.*, Col.3:40-46.

7. at the end of each RTS period [claims 1, 5]

'633 claim term	Telcordia's construction	Defendants' construction
at the end of each RTS period [claims 1, 5]	after each RTS period has ended	at the end of each RTS period

The parties dispute whether the phrase "at the end of each RTS period" in the context of, for example, "transmitting from the source node to the destination node an RTS at the end of each RTS period," means transmitting the RTS at the exact moment in time at which the RTS period ends, or alternatively means transmitting the RTS after the RTS period has ended. Col.9:1-2.

The specification supports Telcordia's construction and is inconsistent with defendants' proposal because it indicates that a series of steps occurs after the RTS period ends but before the RTS is actually transmitted. For instance, the specification explains that "[a]t the end of each RTS period, the current count of the free-running P-bit counter is sampled. That sampled value is the RTS, which is transmitted via the adaptation layer." Col.4:6-9. In the preferred embodiment, after the RTS period ends and the P-bit counter is sampled, the ATM cell payload is processed in processor 16 and an ATM header is added in assembler 17. Only then is the cell transmitted. Col.6:52-57. Obviously, these functions do not all occur at the precise moment in time at which an RTS period ends.

Defendants' proposed construction would, therefore, exclude the preferred embodiment, a result that is "rarely, if ever, correct and would require highly persuasive evidentiary support." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

8. the period between each pulse [claim 1] / the periods between pulses [claim 5]

'633 claim term	Telcordia's construction	Defendants' construction
the period between each pulse [claim 1] the periods between pulses [claim 5]	the interval between each pair of pulses in the signal produced from the received RTS codes	the time interval between two pulses

The dispute regarding the meaning of the periods "between pulses" centers on whether the phrase should be construed in the abstract, as defendants propose (*i.e.*, as just a time interval between any pulses), or, alternatively, should recognize that, in the context of the claims, the time period recited is not one that exists between any two pulses. Instead, as Telcordia proposes, the period referred to in the claim is clearly related to particular events recited in the claim. Specifically, Telcordia's construction recognizes that these pulses are part of a signal that is produced from received RTSs.

Moreover, the language of claim 5 clearly supports Telcordia's construction: "converting the received RTSs into a pulse signal in which the periods between the pulses are determined from the numbers of network clock cycles." Col.10:19-21. Telcordia submits that this phrase should be construed to explain which particular pulses relate to the recited period, instead of providing an abstract definition.

9. derived network clock frequency f_{nx} / derived network clock [claims 11, 33]

'633 claim term	Telcordia's construction	Defendants' construction
derived network clock frequency f_{nx} [claims 11, 33]	The frequency of the network clock signal f_n expressed as a factor of x (where x may be 1).	*See* construction of "derived network clock" below.
derived network clock [claims 11, 33]	*See* construction of "derived network clock frequency f_{nx}" above.	a clock derived by dividing the network clock by a rational number

Although the parties do not seem far apart, Telcordia's construction of these disputed claim terms is technically accurate and supported by the specification while defendants' construction, in requiring the function of "dividing the network clock," improperly limits the claim to the single embodiment that employs a divider 11 for reducing the frequency of the network clock. Claims 11 and 13 provide for "defining a derived network clock frequency f_{nx} from a network frequency f_n where $f_{nx}=f_n/x$." Col.11:51-53; Col.16:12-14. The specification explains that "[t]his clock, having a frequency f_n, is divided in frequency by a rational factor x by a divider 11 to produce a derived network clock having a frequency

f_{nx}." Col.6:25-28. Telcordia's proposed construction recognizes that the specification states that the factor x can be 1, whereby the derived network frequency f_{nx} is the same as the frequency f_n. Col.6:7-11.

Defendants' construction denies the existence of the embodiment where x equals 1 and improperly seeks to limit the claim to implementations requiring "dividing" (where x is greater than 1). The claim language alone requires rejection of defendants' construction because it requires only that x be a "rational number." The number 1, as well as numbers less than 1, are rational numbers.

10. Additional Improper Summary Judgment Positions

For the following terms, defendants effectively ask the Court to engage in a patent validity analysis:

- counting means [claim 5]
- transmitting means [claim 5] / means for transmitting from the source node an RTS that is equal to the modulo 16 count of derived network clock cycles in the RTS period [claim 11]
- receiving means [claim 5]
- converting means [claim 5]

For the reasons stated above, this is both premature and improper. *See* supra pp. 27-28. Further, Telcordia's constructions are amply supported. *See* Final Joint Claim Chart (Lucent D.I. 93; Cisco D.I. 87).

11. means, at the source node, for defining a derived network clock frequency f_{nx} from a network frequency f_n where $f_{nx}=f_n/x$, x is a rational number, and f_{nx} is less than or equal to twice the service clock frequency [claim 11]

'633 claim term	Telcordia's construction	Defendants' construction
means, at the source node, for defining a derived network clock frequency f_{nx} from a network frequency f_n where $f_{nx}=f_n/x$, x is a rational number, and f_{nx} is less than or equal to twice the service clock frequency [claim 11]	The function is "defining a derived network clock frequency f_{nx} from a network frequency f_n where $f_{nx}=f_n/x$, x is a rational number, and f_n/x is less than or equal to twice the service clock frequency." The corresponding structure is divide by x circuit 11 (Fig. 2), or a direct connection to the network clock when x=1, or a multiplier (PLL) when x is less than 1.	The function is "defining a derived network clock frequency f_{nx} from a network frequency f_n." The corresponding structure is divide by x circuit 11.

The parties agree that this claim element is a means-plus-function limitation pursuant to 35 U.S.C. § 112(6). The parties disagree as to the recited function. Telcordia contends that the function must include the "where" clause, which gives parameters and meaning to the mathematical variables found in the functional language of the claim element, whereas defendants contend that a truncated version of the recited function will suffice.

In construing an analogous claim term, the Federal Circuit explained that "[t]he function of a means-plus-function claim must be construed to include the limitations contained in the claim language," when it determined that the function of the claim term "means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite" is not just limited to "rotating said wheel in accordance with a predetermined rate schedule," but rather includes the additional limitations stated in the claim. *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1315, 1319 (Fed. Cir. 2003). Applying this principle, Telcordia contends that the additional limitations in this disputed claim term are part of the recited function.

The parties also disagree as to the corresponding structure found in the specification for performing the function. While both parties agree that the "Divide by X" circuit 11 of Figure 2 is a corresponding structure, Telcordia's construction recognizes that another corresponding structure is disclosed in an embodiment for which "x=1." Col.6:10. In the disclosed embodiment in which x=1, no division is required, and therefore the corresponding structure contemplated would be a connection to the network clock without any intervening divider.

Similarly, Telcordia's construction recognizes that other corresponding structures are also necessarily disclosed because x can be less than one, in which case the Divide by X circuit 11 would operate as a multiplier. Telcordia's construction thus accounts for each corresponding structure while defendants' construction inexplicably ignores two of the three embodiments.

12. means, at the source node, for counting the derived network clock cycles modulo 16 in an RTS period [claim 11]

'633 claim term	Telcordia's construction	Defendants' construction
means, at the source node, for counting the derived network clock cycles modulo 16 in an RTS period [claim 11]	The function is "counting the derived network clock cycles modulo 16 in an RTS period." The corresponding structure is P-Bit Counter 12 (Fig. 2).	The function is "counting the derived network clock cycles modulo 16 in an RTS period." The corresponding structure P-Bit Counter 12 (where P=4) and Latch 15.

The parties agree that this claim element is a means-plus-function limitation under § 112(6), and they also agree on the recited function of the claim element. Their disagreement concerns the structure corresponding to the recited function. Telcordia's proposed construction is based on the express language of the specification, which discloses a P-bit counter as the structure for counting the derived network clock cycles. Specifically, the specification states that "[t]he derived network clock, f_{nx}, drives a P-bit counter, which is continuously counting these derived network clock pulses, modulo 2^P." Col.6:38-40. Similarly, the specification states "[a]t the source node, a free-running P-bit counter counts clock cycles in a clock signal derived from the network clock." Col.3:66-Col.4:1. The specification thus associates structure (the P-bit counter) to the function recited in the claim. *See B. Braun Med. Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997).

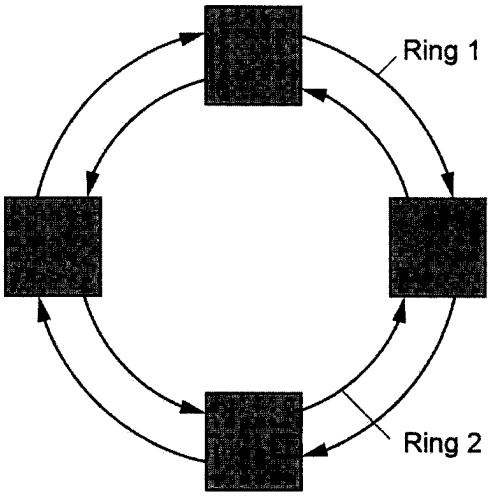
Defendants' proposed identification of structure incorporates latch 15. The specification, though, does not link or associate latch 15 as structure for performing the "counting" function, but instead states that the latch 15 serves only to "sample[] the current count of counter 12." Col.6:47-48. Nowhere in the specification is latch 15 disclosed as structure that counts anything at all, much less the specific structure that counts the derived network clock cycles as called for in the claim.

In sum, Telcordia's construction accurately identifies the structure corresponding to the recited function whereas defendants' construction identifies structure that has nothing to do with "counting."

C. The '763 Patent

The accident occurs frequently: Utility workers digging into the ground cut a cable, potentially disrupting phone service, email, and other communications to buildings in the area. Fortunately, communications networks are designed to survive such accidents.

In the typical prior art communications network, a "node" on the network can send messages to other nodes, but only in one direction. As a result, the most common approach used in the prior art to avoid service disruptions caused by accidents is (as shown in the figure below) to have both a main path (Ring 1) and a standby path (Ring 2) that is used when the main path fails:



When a problem occurs, the prior art systems transfer communications to the standby ring or initiate a "looping back" of communication received on one ring to the other ring. Col.1:25-33. The techniques for transferring communications and "looping back," however, are complicated. Col.1:34-37.

Richard Lau's '763 patent improves on the prior art by providing a simple way to survive accidents and other service failures. Like the old arrangements, Lau arranged his network in a ring configuration and used redundant communications paths. But unlike the prior art, Lau did not seek to maintain the ring characteristics by transferring communications to a standby path following a fault. Indeed, Lau's arrangement does not function as a ring following a break in the main path. Col.1:67-Col.2:7. Instead, Lau provides parallel, active paths and provides protection switching for lower level, or "subrate" communications, within the rings when faults occur.

Ring communications consist of message-carrying subrate channels that are combined together, or "multiplexed," to form a main signal. Col.1:41-42. When a fault is detected, Lau's arrangement inserts error signals into the faulty subrate channels within the main signal. The error signals allow the signals from the good subrate channels on the other ring to be substituted at the destination node for the

signals from the faulty subrate channels. Using this arrangement, the nodes do not need to know in advance which "ring" or main signal to use, significantly reducing the complexity of the arrangement.

1. a communications network having a plurality of nodes interconnected in a ring configuration [claims 1 and 7]

'763 claim term	Telcordia's construction	Defendants' construction
a communications network having a plurality of nodes interconnected in a ring configuration [claims 1 and 7]	a communications network in which a plurality of nodes are connected to form a loop	a communications network in which all of the nodes are connected one after another to form a closed loop

The construction of "a communications network having a plurality of nodes interconnected in a ring configuration" is based on the plain meaning of the words. It is simply "a communications network in which a plurality of nodes are connected to form a loop," which is consistent with the illustrations of the rings in the '763 patent. *See, e.g.,* Fig.1.

Defendants' construction, "a communications network in which all of the nodes are connected one after another to form a closed loop," reads limitations into the claims that exclude embodiments of the specification, which is disfavored. Specifically, as shown in Figs. 3 and 4 of the '763 patent, the communications networks of the '763 patent can include multiple nodes that do not exist within a "closed loop." In Fig. 3, for example, ring 402 is not a "closed loop" because pre-selected channels traversing ring 402 leave the ring at node 406 and traverse ring 404 before reaching the next node of ring 402. Col.3:68-Col.4:6. Thus, defendants are incorrect in contending that all nodes of the communications network are connected, one after another, in a closed loop. *See Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1354 (Fed. Cir. 2004) (refusing to read into term "speaker phone" a requirement of a hands-free speaker phone or structure beyond a microphone and a speaker because "[t]o require more structure would impermissibly exclude a preferred embodiment from the claim limitation").

2. multiplexed subrate communication[s] [claims 1 and 7] / evaluating the integrity of the multiplexed subrate communications [claims 1 and 7]

'763 claim term	Telcordia's construction	Defendants' construction
multiplexed subrate communications [claims 1 and 7]	constituent channels of a main signal	a high-level signal that can be separated into its constituent channels
evaluating the integrity of the multiplexed subrate communications [claims 1 and 7]	determining if a defect exists with the multiplexed subrate communications	detecting whether each high-level signal is defective (*e.g.*, whether there is a cut link or a failed node)

The term "multiplexed subrate communications" focuses not on the main (or "high-level") signal, as defendants contend, but on the subrate signals or channels that are combined to become the communications signals on the ring. Defendants' construction thus seeks to change the focus of the term and add a limitation the language does not require.

Both parties' construe the subphrase "evaluating the integrity" as detecting a defect or determining if a defect exists. Defendants' inclusion of the term "each" is ambiguous, however, seeming to imply that errors are detected only if they occur on both rings. This is inconsistent with the specification (Col.3:9-11) and the claim language. Defendants also limit the evaluation function to the "high-level" signal, even though the claim language is not so limited. Clearly, "evaluating the integrity of the multiplexed communication" includes inspecting the subrate communications for defects. If defects can be detected in all the subrate signals, then defects in less than all the subrate signals can also be detected. Defendants' proposed construction appears to exclude the latter possibility, which arbitrarily and improperly limits the scope of the claim.

3. associated with the first ring and the second ring [claim 1] / associated with both the first ring and the second ring [claim 7]

'763 claim term	Telcordia's construction	Defendants' construction
associated with the first ring and the second ring [claim 1]	related to the first ring and the second ring	shared by both the first ring and the second ring
associated with both the first ring and the second ring [claim 7]	related to the first ring and the second ring	shared by both the first ring and the second ring

The ordinary meaning of "associated with" conveys a relationship between the subject and object of the phrase. *Webster's Third New Int'l Dictionary* 132 (1961) ("4 : to join or connect in any of various intangible or unspecified ways (as in general mental, legendary, or historical relationship, in unspecified causal relationship, or in unspecified professional or scholarly relationship).") (attached as Ex. G). It does not, as defendants contend, narrowly require "sharing." In fact, the word "associated" is used numerous times in the specification and claims and, each time, it refers to a relationship and not "sharing." *See, e.g.*, Col.2:46; Col.2:55; Col.4:11; Col.4:60-61; Col.4:67; Col.5:7-8; Col.5:39; Col.5:46. *See also Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("[A] claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.").

4. inserting an error signal on designated ones of said [the] subrate communications [claims 1 and 7] / the detection of said error signal on said at least one of the subrate communications [claim 8] / the detection of said error signal on one of the subrate communications [claim 2]

'763 claim term	Telcordia's construction	Defendants' construction
inserting an error signal on designated ones of said [the] subrate communications [claims 1 and 7]	inserting an error signal on subrate signals for which a defect is detected	inserting an error signal on the channels following the demultiplexing
the detection of said error signal on said at least one of the subrate communications [claim 8] / the detection of said error signal on one of the subrate communications [claim 2]	detection of an error signal inserted into at least one of the subrate signals	detecting an error signal on one or more of the channels following the demultiplexing

The correct construction of "inserting an error signal on designated ones" of the subrate communications requires only that error signals are inserted on subrate signals for which a defect is detected. This construction is consistent with the PTO's comments that "the sending of an error signal on a designated one of the sub-rate channels on one or both rings is not disclosed or suggested by the prior art." January 30, 1989, Notice of Allowability (attached as Ex. H). Similarly, the "detection" of claims 2 and 8 merely requires detection of an error signal inserted into "one" or "at least one" of the subrate signals.

Although neither claim 1 nor claim 7 recites "following the demultiplexing" (or includes any language from which that requirement flows), defendants add the phrase "following the demultiplexing" to the claimed phrases. Claim 1 recites "insertion means, associated with the demultiplexers." Claim 7 does not even contain the "associated" limitation in the "inserting step." Defendants are apparently attempting to incorporate a limitation from the specification based on the statement that "a node detects a fault in an incoming line, an error signal is placed on all of the channels following the demultiplexing" in the patent's summary of the invention. Col.1:52-54. But the language of claims 1 and 7 is broader than that description, and defendants are not relying on the specification for the meaning of the claim language but are instead simply importing this limitation into the claims. *See Resonate Inc. v. Alteon Websystems, Inc.*, 338 F.3d 1360, 1364-65 (Fed. Cir. 2003) ("[T]he written description is not a substitute for, nor can it be used to rewrite, the chosen claim language. Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim."). Defendants further change the "inserting" recitation to inserting an error signal on "the channels" rather than on "designated ones" of the channels. This blatant rewriting of the claim language should be rejected.

5. monitoring means [claim 7]

'763 claim term	Telcordia's construction	Defendants' construction
monitoring means [claim 7]	This claim element should not be construed in accordance with 35 U.S.C. § 112(6). Circuitry for determining if a defect exists with the multiplexed subrate communications.	This claim element is a means-plus-function limitation pursuant to 35 U.S.C. § 112(6). The claimed function is "evaluating the integrity of the multiplexed subrate communications on the first ring and the second ring." This claim limitation is indefinite for failure to satisfy the requirements of 35 U.S.C. § 112(2) because the specification does not describe any structure for performing the claimed function.

Claim 7 is a method claim that recites "evaluating the integrity of the multiplexed subrate with monitoring means associated with the first ring and the second ring." Thus, as explained above with regard to "evaluating the integrity of the multiplexed subrate communications," claim 7 merely requires using monitoring circuitry to determine if a defect exists with the multiplexed subrate communications.

Defendants construe method claim 7 as requiring apparatus means-plus-function features because of the recitation of "monitoring means." But using the word "means" in a claim does not always invoke § 112(6), and where, as here, the term is not linked to a specified function, § 112(6) does not apply. *See Wenger*, 239 F.3d at 1237 ("Without an identified function, the term 'means' in this claim cannot invoke 35 U.S.C. § 112, ¶ 6.") (citation omitted). In short, as used in claim 7, it is apparent that "monitoring means" means "monitoring circuitry" and was not intended to invoke § 112(6).

Further, even if this claim element were construed under § 112(6), defendants would be wrong. In that event, the recited function would be "evaluating the integrity of the multiplexed subrate communications," etc., and the corresponding structure would be the circuits described in the specification (for example, controllers 117 and 118) as monitoring and evaluating the integrity of the multiplexed subrate signals arriving from rings 101 and 100, respectively. Col.3:4-17.

6. Additional Improper Summary Judgment Positions

Once again, for all of the following terms, defendants improperly thrust the Court into what is in effect a summary judgment (rather than claim construction) analysis:

- monitoring means, associated with the first ring and the second ring, for evaluating the integrity of the multiplexed subrate communications on the first ring and the second ring [claim 1]
- monitoring means [claim 7]
- insertion means [claim 1]
- selector means [claim 2]

For the reasons previously stated, this is both premature and improper. *See supra* pp. 27-28. Moreover, as set forth in the Final Joint Claim Chart (Lucent D.I. 93; Cisco D.I. 87), ample intrinsic support exists for Telcordia's proposed constructions.

IV. Conclusion

For the reasons stated above, Telcordia respectfully requests that the Court adopt Telcordia's proposed claim constructions.

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CERTIFICATE OF SERVICE

I hereby certify that on the 3rd day of March, 2006, the attached **TELCORDIA'S OPENING CLAIM CONSTRUCTION BRIEF** was served upon the below-named counsel of record at the address and in the manner indicated:

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